AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1-29. (Canceled)

30. (New) A microcomputer provided with a flash memory and having a self-programming function of rewriting a program stored in said flash memory, comprising:

a rewrite program area for storing a program for a rewriting processing procedure for said flash memory; and

a controller for forming a flag area locally in said flash memory when the rewriting program stored in external storage means or said rewrite program area is written into said flash memory, performing determination of completion of a plurality of stages of rewriting processing or determination of whether the plurality of stages are good or bad and renews recording results of the determination of completion of each stage or results of determination of whether each stage is good or bad into said flag areas a step at a time.

31. (New) A microcomputer provided with a flash memory according to claim 30, wherein said flash memory includes a plurality of blocks each of which is an erasable unit and includes a data area and a flag area, and said controller maps the data areas of the plurality of blocks to successive addresses.

32. (New) A microcomputer provided with a flash memory and having a self-programming function of rewriting a program stored in said flash memory, comprising:

a rewrite program area for storing a program for a rewriting processing procedure for said flash memory;

a controller for forming a flag area locally in said flash memory when the rewriting program stored in external storage means or said rewrite program area is written into said flash memory, performing determination of completion of a plurality of stages of rewriting processing or determination of whether the plurality of stages are good or bad and recording results of the determination into said flag areas; and

said controller writing an expected value when rewriting is completed regularly into the flag area at the last stage of rewriting processing and changes said expected value at the first stage of rewriting processing.

33. (New) A microcomputer provided with a flash memory and having a self-programming function of rewriting a program stored in said flash memory, comprising:

a rewrite program area for storing a program for a rewriting processing procedure for said flash memory;

rewriting means for forming a plurality of flag areas locally in said flash memory when the rewriting program stored in external storage means or said rewrite program area is written into said flash memory; and

a controller for performing determination of completion of a plurality of stages of rewriting processing or determination of whether the plurality of stages are good or bad and

renews recording results of the determination of completion of each stage or results of

determination of whether each stage is good or bad into said flag areas a step at a time.

34. (New) A microcomputer provided with a flash memory according to claim 33,

wherein said flash memory includes a plurality of blocks each of which is an erasable unit and

includes a data area and a flag area, and said rewriting means maps the data areas of the plurality

of blocks to successive addresses.

35. (New) A microcomputer provided with a flash memory and having a self-

programming function of rewriting a program stored in said flash memory, comprising:

a rewrite program area for storing a program for a rewriting processing procedure for said

flash memory;

rewriting means for forming a plurality of flag areas locally in said flash memory when

the rewriting program stored in external storage means or said rewrite program area is written

into said flash memory;

a controller for performing determination of completion of a plurality of stages of

rewriting processing or determination of whether the plurality of stages are good or bad and

renews recording results of the determination of completion of each stage or results of

determination of whether each stage is good or bad into said flag areas a step at a time; and

flag state notification means for comparing, when power supply is made available after

the rewriting is completed, values read out from said flag areas with expected values for said flag

areas stored in advance and notifying said controller of results of the comparison.

36. (New) A microcomputer provided with a flash memory according to claim 35, wherein said flash memory includes a plurality of blocks each of which is an erasable unit and includes a data area and a flag area, and said rewriting means maps the data areas of the plurality of blocks to successive addresses.

37. (New) A flash memory used in rewriting a stored program, comprising:

a flag area for renewing recording results of the determination of completion of each stage or results of determination of whether the each stage is good or bad a step at a time.

38. (New) A flash memory used in rewriting a stored program, comprising:

a flag area for writing an expected value when rewriting is completed regularly into the flag area at the last stage of rewriting processing and changes said expected value at the first stage of rewriting processing.

39. (New) A method of storing a program into a flash memory of a microcomputer provided with said flash memory and having a self-programming function of rewriting the program stored in said flash memory, wherein

a plurality of flag areas are formed locally in said flash memory when a rewriting program is written into said flash memory, and determination of completion of a plurality of stages of rewriting processing or determination of whether the plurality of stages are good or bad is performed, where after results of the determination are made and renews recorded results of

5

the determination of completion of each stage or results of determination of whether each stage

is good or bad into said flag areas a step at a time.